ENGINEERING NEWS-RECORD

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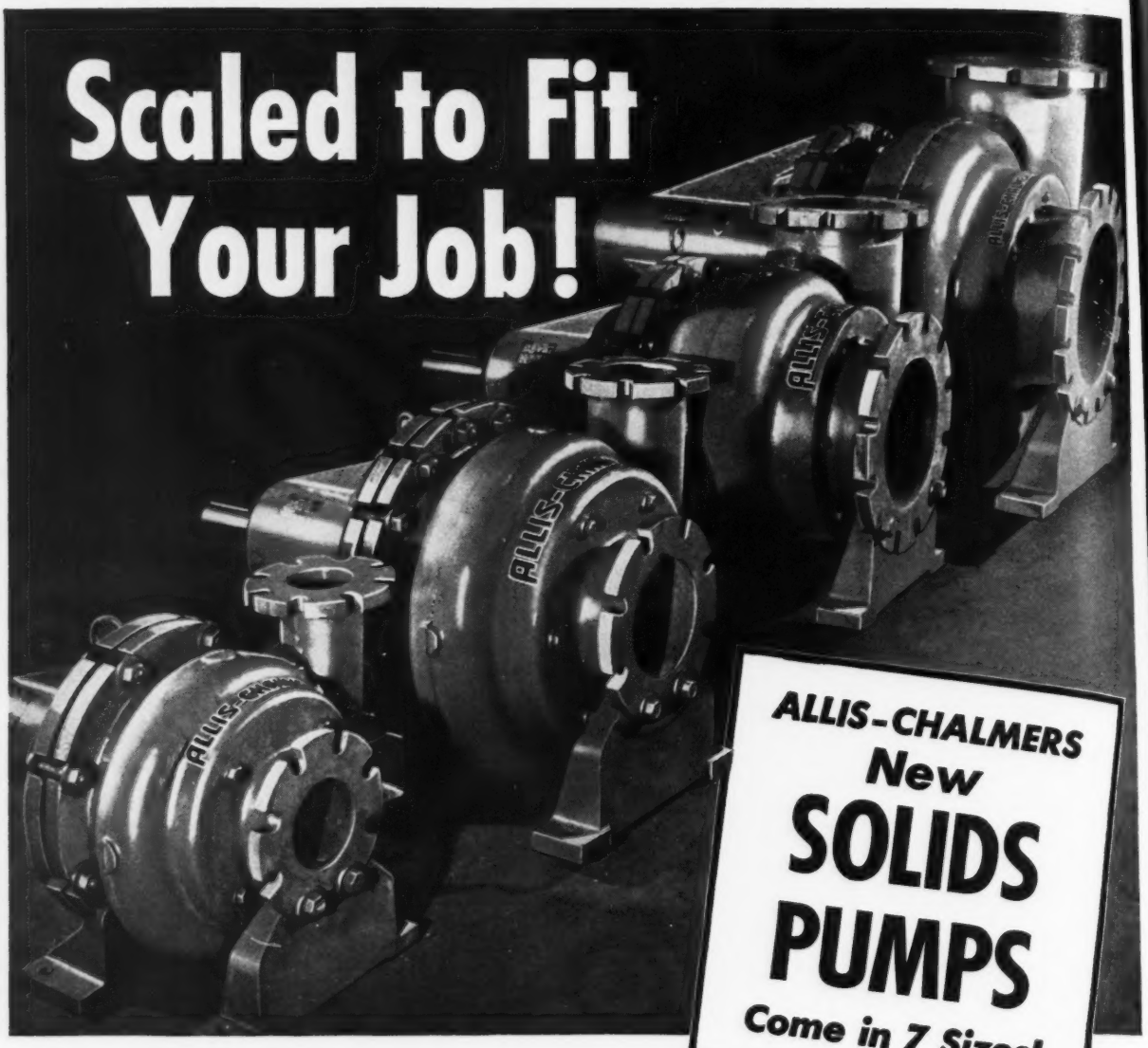

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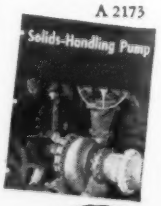

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News of the Week

ENGINEERING NEWS-RECORD • JUNE 5, 1947 • VOLUME 138 • NUMBER 23

Taft-Hartley Bill to change construction labor relations

Congress speeds action on nation's first major labor legislation in 12 years—Bill contains ban on closed-shop, provides injunctive powers for government

Labor relations in the construction industry, more than any other, would be sharply altered by the Taft-Hartley Bill if it becomes law, Washington observers said last week as the compromise measure began to move toward final passage in the two houses of Congress.

If President Truman signs the bill—which bans the closed shop and gives special consideration for professional employees—or Congress overrides a veto, the country will get its first peacetime change in national labor policy since President Roosevelt signed the National Labor Relations (Wagner) Act on July 5, 1935.

As agreed to by Senate-House conferees, this new law would completely rewrite the Wagner act, to eliminate its one-sidedness in organized labor's favor. It also would cover many activities not touched on by the old law.

Only those employers engaged in interstate commerce would be covered by the Taft-Hartley Bill. Others would be affected by labor law changes in the states—13 of which already have banned the closed shop.

Briefly, the bill provides:

Closed Shop: It would be an unfair labor practice. The Bureau of Labor Statistics recently reported 94 percent of the construction employees covered by union contracts worked under what amounts to closed shop conditions. In most cases, employers hire through the union, some considering it an advantage.

The bill would not actually bar continuation of such an arrangement, but it could not be put into a labor contract. Nor could it be enforced if an employer wanted to hire a non-union man. Dismissal for non-membership in a union could be demanded only for failure to pay dues. The union shop will probably become prevalent in the industry, but a majority of the employees would have to favor it before it could be granted.

Engineers: Professional employees, such as engineers, architects, research personnel and the like, could not be forced into a bargaining unit which includes non-professionals unless it was agreeable to the professionals. Professionals could decide their bargaining group, but otherwise they would have the same rights as other employees in bargaining with management. The definition of "professional employee" contained in the Taft-Hartley Bill is exactly the same as the Senate bill's version (*ENR* Apr. 17, vol. p. 560).

Jurisdictional Strikes: This bane of the construction industry would become an unfair labor practice and could be enjoined at the request of the National Labor Relations Board.

Secondary Boycott: Also an unfair labor practice, enjoinable.

Injunctions: Permissible, when sought by NLRB, against boycotts, jurisdictional strikes and featherbedding (payment of standbys).

Featherbedding: The bill makes it illegal for an employer to pay money "or other thing of value in the nature of an exaction for services which are not performed."

High Union Fees: It would be an unfair labor practice for a union to charge an initiation fee which is "excessive or discriminatory."

Strikes: 60-day advance notice of contract termination or strikes would be required. The government could enjoin, for 80 days, "national emergency" strikes which would "imperil the national health or safety."

Suits: Unions could be sued for violation of contract or for damages resulting from boycotts and jurisdictional strikes.

Foremen: They would lose legal protection in bargaining, but could act on their own.

Financial Statements: Unions seeking

(*Continued on page* 3)

Congress rushes construction bills

Rushing to get their legislative program into effect after long preliminary debate, Congressmen last week had advanced a number of measures affecting the construction industry, and leaders expected that some of the bills would be ready for Presidential signature shortly.

A survey by *Engineering News-Record* last week showed these results of congressional activity:

Appropriations for the Agriculture Department for next year contain a severe cut in funds for road work by the Forest Service. The forest highway fund was reduced from the $11,300,000 (the budget had recommended to $5,300,000), and the fund for access roads to timber areas was trimmed from $12,500,000 to $10,000,000.

In a compromise Second Deficiency Bill, the House and Senate agreed on an appropriation of $3,000,000 for the Federal Works Agency for the conversion of war buildings into classrooms and laboratory facilities at colleges where veterans are in attendance. The Senate had favored $20,000,000, and the House nothing. The Federal Public Housing Authority is provided with $35,500,000 to continue the conversion of war housing for use as housing at colleges in a bill now awaiting the President's signature.

The bill (H. R. 3342) to provide engineering aid to foreign countries, including the loan of engineers employed by the federal government, has been reported out favorably by the House Committee on Foreign Affairs.

(*Continued on page* 3)

NEWS IN BRIEF

In telegraphic form, here are latest news developments on the engineering and construction front during the week.

Highways—Indiana's Highway Commission is planning to relocate Route 59 near *Mansfield* to eliminate curves and do away with a 230-ft. covered bridge over Raccoon Creek. However, lack of funds and engineers and high costs will cause a 50 percent curtailment in Indiana's federal-aid road building program, it is said . . . County Engineer A. S. Porter of *Cuyahoga County, Ohio,* asserts that 60 of the 200 bridges in the county should be replaced. . . .A new traffic plan has been proposed at *Atlanta, Ga.,* which calls for a highway around the downtown area. . . . The Virginia State Highway Commission has approved low bids on four construction projects including one for a 4-lane overpass over the Virginian Railway and the Roanoke River at *Kumis* . . . *Arkansas* has awarded 126 contracts for roads, totalling about $17,500,000.

Construction—Cardinal Spellman has announced that the Archdiocese of New York will spend $25,000,000 for churches, schools, hospitals and other institutions. This week ground is being broken for the $4,000,000 Archbishop Stepinac High School at *White Plains, N. Y.* . . .The state budget committee in Indiana has approved an $850,000 modernization of the state hospital at *Madison.* . . . Approval has been granted by the Delaware office of the Housing Expediter for an addition to the Du Pont plant at *Newport, Del.* It will be an $800,000 project. . . . In *Florida* a special legislative committee has agreed to recommend a revised $34,800,000 state building program, assigning top priority to work on correctional institutions. . . . Nearly 2,000 construction workers have begun flying to *Alaska* from Seattle, Wash., to work on a $51,000,000 Army program at three air bases. . . . *Mississippi* has embarked on a public construction program involving $100,000,000 in the next two years. . . . A new signal repair shop for the Canadian National Railways is to be built at Point St. Charles, *Montreal, Que.,* an announcement said.

Housing—Algernon Blair of Montgomery, Ala., with an offer of $547,179, was apparent low bidder on a job of reconverting a group of barracks into apartment units at *Keesler Field, Miss.* . . .In a program calling for construction of 230 low-cost homes at *Miami, Fla.,* M. R. Harrison's construction organization is turning them out at the rate of eight every five working days. . . . Plans are under way for a $2,000,000 rental project near *Galesville, N. Y.,* to have 250 garden-type apartments.

Labor—The bricklayers union in the *Cleveland, Ohio,* area is reducing required apprentice-training period from 4 to 3 years. They have permitted the use of 200 apprentices now, requiring them to attend a trade school half a day a week and to have 600 working days training on the job before becoming journeymen. . . .Collection of garbage, disposal of sewage, digging of graves and maintenance of streets was suspended in *Belleville, Ill.,* recently as 29 city laborers, chauffeurs and operating engineers remained away from their jobs in protest against the city council's refusal to grant them an additional $10 a month increase in salary.

THE COVER PICTURE

New engineering equipment under development at the Army Engineers' laboratory at Ft. Belvoir, Va., includes this helicopter which carries specially-developed aluminum pipe for quick construction of fuel pipelines.

The pipe was included in developments made public at an annual "open house" at Ft. Belvoir, at which more than 2,000 engineers saw a surprisingly large assortment of special tools for engineers, many of which were not displayed at last year's exhibit (*ENR* June 13, 1946, vol. p. 928).

The helicopter, in a demonstration flight, easily delivered twelve 20-ft. sections of pipe without landing, dropping the conduit from a short distance above ground. Each section of pipe weighs 65 lb. During the 2-day show, two helicopters made a total of eight runs to deliver a total of 960 ft. of 6-in. pipe and 2,000 ft. of 3-in. hoseline. Total time for the eight runs was less than a half-hour, although the hose and pipe were carried more than 25 miles.

Memphis bridge piers finished 8 months early

Completion of a contract for the construction of piers for the new Mississippi river bridge at Memphis, Tenn., (*ENR* Jan. 30, vol. p. 174) has been announced by the Arkansas and Tennessee highway departments. Work on the seven piers was begun by Merritt-Chapman & Scott Corp., on October 15, 1945, and has been completed 8 months ahead of schedule at a cost of $4,333,000.

Frank A. Barbour dies; sanitary engineer

Frank A. Barbour, 77, consulting sanitary engineer for many communities in Massachusetts, New York and New Jersey, died May 24, in Framingham, Mass. A graduate of the University of New Brunswick, 1888, he was engineer in charge of sewer and water installations in Boston, Brockton, Webster, Marblehead, Taunton and other Massachusetts municipalities, as well as for several in New York and New Jersey. He was in charge of installing utilities at Fort Devens, Mass., during World War 1 and again when it was rebuilt for World War II.

Mr. Barbour was past president of the American Water Works Association, past president of the New England Water Works Association, a former director of the American Society of Civil Engineers. He was also a member of the Boston Society of Civil Engineers and the Boston Engineers Club.

Plan 4 new bridges over Ohio and Wabash rivers

The Indiana State Budget Committee was asked May 20 for a grant of $93,000 by the Indiana Toll Bridge Commission for the planning of four toll bridges. The commission has a $2,500,000 appropriation from the 1947 General Assembly for this purpose, subject to approval of the governor and the budget committee.

Three of the proposed bridges would be over the Ohio River at Cannelton, Mauckport and Aurora-Lawrenceburg. The fourth would cross the Wabash River at Mt. Vernon.

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Consolidation of U. S. housing groups proposed in Presidential message

President asks Congress for new agency to prevent disintegration of program with end of war powers act

Seeking to prevent the "disintegration" of the federal housing program on the expiration of the First War Powers Act, President Truman last week proposed the formation of a new agency to consolidate all federal housing functions under one head.

Presenting the Congress with his third reorganization report, under provisions of the Reorganization Act of 1945, Mr. Truman called legislators' attention to a prediction that the provision of adequate housing will remain a major national objective "throughout the next decade."

He reviewed the creation by Congress, over a period of years, of the various federal agencies now dealing with the housing problem, and commented that, with the expiration of the War Powers Act, these activities—now concentrated in the National Housing Agency—will revert to their former locations in government. "When this occurs," he added, "the housing programs will be scattered among some 13 agencies in seven departments and independent establishments.

New agency created

Briefly, the new plan would group nearly all of the existing permanent housing agencies and functions—along with remaining emergency housing activities now handled by the Office of the Housing Expediter—into a new organization, to be known as the Housing and Home Finance Agency.

Constituent operating members of this new agency would include: A new agency called the Home Loan Bank Board to administer the Federal Saving and Loan Insurance Corp., the Home Owner's Loan Corp., and the Federal Home Loan Bank Board; the Federal Housing Agency, to be included intact in its present functions; and a Public Housing Administration, to take over the functions of the U. S. Housing Authority and "certain remaining emergency housing activities," pending their liquidation.

The new agency would be headed by an administrator; the three members of the Home Loan Bank Board and two commissioners who would head up the Federal Housing Administration and the Public Housing Administration.

In addition to the newly-created HHFA, the President's plan would also create a National Housing Council, to represent "the few housing activities which it is not practical to place within the HHFA since they form integral parts of other broad programs." HHFA and its constituent agencies, and other departments and agencies having important housing functions, would be represented on this council, to insure coordination of activities.

Functions outlined

Under the President's proposal, the administrator of the HHFA would take over the functions heretofore vested in the Federal Loan Administrator and the Federal Works Administrator, with respect to the housing agencies and functions now administered within the existing federal loan agencies and the Federal Works Agency, together with supervision and direction of emergency housing activities for the remainder of their existence.

Additionally, the administrator would hold, on behalf of the U. S., the capital stock of the Defense Homes Corp.; would take over from the armed forces the management of national defense and war housing, excepting that on military posts or reservations; and take over from all agencies designated to provide temporary shelter in defense areas.

If approved by Congress, the plan would abolish the Federal Home Loan Bank Board, the Board of Directors of the HOLC, the Board of Trustees of the Federal Savings and Loan Insurance Corp., the office of the Federal Housing Administrator, and the office of the Administrator of the U. S. Housing Authority.

Taft-Hartley labor bill

(*Continued from first page*)

government assistance would have to file annually with the Secretary of Labor copies of their constitution and by-laws and a report disclosing salaries and allowances above $5,000 paid to union officers, election procedures, initiation fees, dues and detailed procedures of the union for calling strikes, ratifying contracts, authorizing bargaining demands, fining and expelling members, etc. Union officials would have to swear they are not Communist.

Welfare Funds: For funds begun since Jan. 1, 1946, employer contributions would be permitted only if funds are administered jointly and the benefits are set forth in writing.

Free Speech: Expression of views in any form would not be an unfair labor practice "if such expression contains no threat of reprisal or force or promise of benefit."

Rush work on construction legislation

(*Continued from first page*)

No substantial changes were made in this bill, which was described in detail in *ENR* May 15, 1947, vol. p. 793, and which is similar to the Bloom Bill before the last Congress.

The Senate Appropriations Committee is expected to report out the Interior Department Appropriations Bill (H. R. 3123) at an early date. Hearings are now being finished and indications are that the Senate will go along with the House in much of its cutting work, which totaled about 50 percent of the amount recommended by the Bureau of the Budget.

Little hope for St. Lawrence

Hearings have been started by the Senate on the St. Lawrence Seaway Project (S. J. R. 111). Ex-president Hoover and Secretary of State Marshall have testified before the Senate Foreign Relations Committee that they are strongly in favor of the project. Chances of the bill becoming law this year appear slim, but Senator Vandenburg, who is pushing the bill, is hopeful that most of the spade work can be done this session to permit early passage of the measure at the next session.

Extensive hearings on the Fulbright Research Policy Bill (S. 493) are being completed by the Senate Committee on Expenditures and this group is expected to report favorably on the bill at an e rly date. The measure attempts to outline the research functions of the Department of Commerce and other government agencies and to establish an industry-government policy.

The Senate Public Works Committee has reported favorably on the bill (H. R. 1874) extending for one year the time funds would be available to the states under the Federal Highway Act of 1944. The House has already passed this proposal without unfavorable comment (*ENR* May 29, 1947, vol. p. 864) and early approval by the Senate is expected.

DEVELOPMENTS BEYOND U. S. BORDERS

Digested from reports by Engineering News-Record correspondents and the McGraw-Hill World News Bureau

City of London, England, and Port Darwin, Australia, announce plans for major reconstruction—Start work on program to implement Argentina's new five-year plan of industrial development

England—The narrow, winding streets of the old City of London and the historic, but cramped, office buildings that border them, are to be revamped if city officials and the London County Council approve a new city plan released last week by the Town Planning Committee.

The plan—an outgrowth of an earlier survey started in 1944 and later dismissed as inadequate—seeks to take bold advantage of the areas cleared by German bombs during the war years, to provide wider and straighter roadways, and numerous open spaces for park development.

Many of the well-known streets in the area—Thames St., Newgate, Ludgate and others—are to be widened to carry additional traffic and to provide new vistas of St. Paul's Cathedral, where many small structures which formerly obstructed the view of the cathedral were destroyed during the war.

Among proposals adopted by planners was a new form of zoning regulation for office buildings, relating the amount of floor space provided to the size of the plot on which the building stands. Under this plan, permissible floor-space would be determined on a ratio of five times the area of the plot. Height of new buildings is also to be controlled, for the two-fold purpose of preventing the domination of historic structures, and to provide better light for office and shop workers.

Australia—While most of the bomb-wrecked cities of Europe will look, when rebuilt, very much as they did before the war, Australia's Port Darwin—target of Jap attacks early in the war—will be a entirely new city.

Eighty-odd Japanese bombing raids levelled the town's buildings, made its fine harbor a ship-graveyard, pot-holed its roads and airports. It appeared to be a city planner's dream come true, when the question of reconstruction came before the Commonwealth government.

On investigation, government officials decided that the destruction of all buildings above ground wasn't enough to give the planners a free hand. They put through sweeping legislation which cancelled all rights-of-way and property registrations in the city area, wiping the slate clean for a fresh start.

In accordance with American planning practice, the final plan zones the city area into residential, commercial and industrial areas, with special provisions for recreational facilities and future cultural centers. Residential areas are planned as neighborhood units, centering around schools, shopping districts and recreational areas, and tied to the rest of the city by parkways. All shopping centers and business areas will incorporate off-street parking areas.

Personalities . . . .

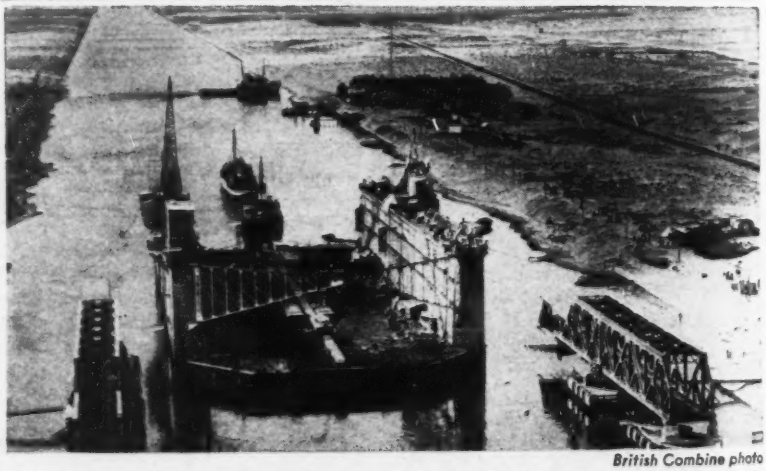
Argentina—Royal B. Lord, president of the World-Wide Development Corp., arrived in Buenos Aires recently to pick up the reins of his engineer-expert group, with which he is planning to whip President Peron's 5-year plan into practical form.

Last year General Lord—a former Army Engineer officer and a West Point graduate (1923)—went to Argentina to plan a World-Wide branch office at Buenos Aires. President Peron asked him to appraise the five-year plan, and set a time table. World-Wide sent work teams into the country to examine phases of the huge reconstruction and development program envisaged by Peron, and has now assembled a "task force" of engineering talent (some 50 men) to implement early surveys.

Chief feature of Gen. Lord's approach to his job is his aim to substitute U. S. engineering-contracting techniques for the series of promoters who now operate. Occasionally, in the past, big engineering jobs have been turned over to a foreign syndicate of engineer-contractor-builders, whose primary concern has been with the profits to be squeezed out of the project.

World-Wide will work with the government to see that the plans are the best and most modern available, and that the contract is let to the most efficient, low bidder.

Turkey—E. E. Halmos and H. Alden Foster, associates of the New York City engineering firm of Parsons, Brinckerhoff, Hogan and Macdonald, arrived in Istambul this week, to inspect a site for a proposed Black Sea port at Zanguldak. The port would be constructed by the Turkish government as a Black Sea outlet for Turkish coal fields located in the northern sector of the country.



British Combine photo

***Dock Passes Through Suez**—A section of Britain's largest floating dock, recently completed at Bombay, India, is towed through the Suez Canal on its way to Malta. The dock—cut in two for the long sea journey—is 885 ft. long, 172 ft. wide and 75 ft. high, and capable of accommodating ships up to 50,000 tons. Cost of construction was $4,500,000.*

EUROPEAN NOTEBOOK . . . .

War and Its Consequences

by WALDO G. BOWMAN

Berlin, May 17, 1947—Dropping down onto Tempelhof Airport in Berlin after a 30-hr. flight from Washington is not a new experience for Americans. Yet each has probably had his own special sensation. Mine was one of surprise at the lack of damage to this famous German field.

The famous and unique steel cantilever canopy, 50 ft. high, extending some 1,200 ft. in a great arc in front of the hangars and administration buildings, exhibits only a few holes in its roof.

Even though Tempelhof was used only as a fighter plane field, hardly worthwhile as a bomber objective, it might have been expected that some V.E.-day pilot might have sprayed its buildings with incendiary bullets just for the hell of it. There is evidence of demolition charges inside some of the buildings and in the underground aircraft assembly factory, but nothing that affects the use of the airport.

That this didn't happen is fortunate, for Tempelhof today is an American airport located in the American sector of Berlin, and our only air outlet to the world from this international island in the center of the Russian zone of Germany. The concrete runway is a product of American Army Engineer construction. American ground personnel and pilots dominate its population; American government officials and, lately, American business men are its principal visitors. The result will be that some day the Germans will get a better and busier Tempelhof than they themselves built.

Tempelhof is not, however, the first consequence of the war that would impress an American engineer or construction man on a trip such as mine. At Kindley Field, Bermuda, one can see one of the best of our war-built airports. The asphalt-surfaced coral runways are as good as ever. The permanent type buildings of local architectural motif are a credit to our planning and the work of F. H. McGraw and Co., the contractor. Only the large hospital, built in a hurry to care for expected casualties from the North African invasion, has failed to be satisfactory. Of concrete-frame type, the mix was made with sea water, and serious corrosion of the reinforcing steel has resulted. Half of the building has been closed as unsafe, and the remainder shows signs of active and continuing deterioration. The entire building will have to be demolished and replaced.

Next stop on my flight from Washington to Berlin was Lagens Field, Terceira Island, Azores, and here the consequences are quite different. Reflecting the difference between the 99-year lease we hold at Bermuda and a short term use-permit, the buildings, aprons and runway that we built are temporary, and not long for this world. The permit runs out the end of this year. It would seem imperative that it be renewed on a long-term basis, for the fine new field that we built on Santa Maria Island, 150 miles south in the Azores chain (*ENR* Aug. 22, 1946, vol. p. 250), has been given to Portugal as a commercial field. Unless the Army Air Transport Command is to be allowed to land there, the Lagens installations must be rebuilt on a permanent scale. One of the consequences of war is our requirement of an air lifeline to the centers of our new responsibilities in Europe.

Despite its long-term shortcomings, Lagens is by no means worn-out or inadequate for present use. However, as was demonstrated when our plane was brought down in a blind landing through a 200 ft. ceiling with the aid of the new radar technique, known as GCA, or ground-control- approach. Lagen's 10,000 ft. long runway 300 ft. wide was a useful adjunct to the process.

These consequences of the war to us, however, are as nothing compared to what it brought the Germans. Looking at the rubble that was the center of Berlin, the wrecked bridges, the inadequate transport, the shabby, shuffling pedestrians, the moral is plain—Never lose a war. And recalling London, Rotterdam and Le Havre suggests a corollary—Never fight one if you can help it.

The lack of damage at Tempelhof is, of course, merely one of the endless contrasts of war's consequences. Not too far away destruction begins, and in the center of the city and throughout the Russian sector to the east there is not much left that is useful or recoverable. Berlin absorbed 71,000 tons of U. S. and British bombs as well as the revenge-directed fire of Russian artillery. Its physical condition is a mess, its rebuilding to anything like its former self doubtful and its present administration and operation a continual headache.

This is no political piece, but no visitor to Berlin can avoid the observation that here on a municipal level is being tested the Allies' ability to administer Germany on a state level, and the world's ability to govern itself through a United Nations Organization. There is no iron curtain to freedom of movement in Berlin, but there is no less real obstruction in Four-Power differences as to how a city should be run.

Here is the setup, to be read by city officials in the U. S. who think they have troubles: The city is divided into four national sectors each with its own military government to supervise the German borough administrations in its area. These military government organizations also supervise the activities of the German Central City Administration through the Allied Kommandatura, Berlin, the Four-Power council which rules the city.

The Kommandatura (Russian for headquarters) is composed of three quadripartite echelons (military-diplomatic for parts). These are the Board of Commandants, consisting of the four commanding generals of the four powers in Berlin; the Board of Deputy Commandants, consisting of the four directors of military government in each sector, and the 19 functional committees which correspond to the municipal bureaus in the German Central City Administration. These committees cover such activities as public works, transport, communications, education and the like.

Legislative proposals originate at the committee level, and are ratified

(*Continued on page 6*)

(*Continued from p. 5*)

at the top levels of the Kommandatura before being issued as an order to the Berlin Oberbuergermeister. Unanimous agreement must be reached on all legislation, and it never comes easily. Nevertheless a total of 876 unanimous orders had been issued by the Kommandatura up to April 23, which our representatives point to with pride.

Berlin is, however, no more a single city than Minneapolis and St. Paul. It is four cities. Within each of its confines the four nations have the power and take what glory they can in their accomplishments. In the American sector this is considerable. It was the least damaged, and it, therefore, is now the cleanest. Its housing is better, and its utilities run more smoothly, although the latter is slightly complicated by the fact that the control of electric power and the supervision of the railroad stations centers in the Russian sector. The American sector has the waterworks.

The functional committee on public works and utilities in the American sector is headed by Lt. Col. John C. Diggs, for over 20 years sanitary engineer of the state of Indiana. Having been over here since the beginning, he is about ready to transfer the job to younger shoulders, but he can look back on substantial achievements.

All the water treatment plants, for example, are back in service, and over 2,300 breaks in mains have been repaired. The worst situation involved 52 breaks in five 48-in. parallel mains in a distance of a little over a mile. Berlin gets its water from 1,300 wells in 16 different locations along the water courses. Treatment is by aeration and filtering to remove iron, carbon dioxide and manganese; and we have added chlorination. In the 3,500 miles of distribution pipe for the entire city there are both high and low pressure systems, so that numerous pumping stations are also involved.

Berlin's sewerage system was more difficult to repair than the water supply, largely because it is more complicated. When the city, many years ago, decided to stop dumping raw sewage into its rivers and canals it overlooked the possibilities of intercepting sewers, and instead built a large number of collecting reservoirs from which the sewage is pumped to irrigation fields outside the city. These facilities took a lot of bomb hits. Also, the sewer lines are for the most part carried across the numerous streams on the bridges; every destroyed bridge included a broken sewer line in its wreckage. Finally, the sludge-gas holders and the activated sludge tanks at both of the large treatment works were badly damaged by bombs. All of the damage in the American sector has been repaired to an extent that the streams are clean again, lines are open and the treatment process is almost normal. No gas is being stored, however.

About a dozen temporary bridges had to be built to carry the sewer lines across the streams, but these are rapidly giving way to permanent installations as the main traffic bridges are rebuilt. Of the 167 bridges in Berlin, 118 were destroyed, 51 in the American sector. About half are back in service.

Electric power was the biggest problem because only 200 megawatts of the 1,000,000 megawatt prewar capacity was available when we came into the city. All of the eight large steam-generating stations were badly damaged and one of them, the largest and newest, was minus its boilers and turbines, which had been shipped to Russia. Not much more than the original capacity is yet available, but attempts are being made to increase this to 400 megawatts by importing power from the hydro plants in southern Germany, from which Berlin has always been supplied in part. Gas capacity, which was only 350 million cu. ft. at the end of the war, is now back up to 1,000,000,000 cu. ft. Garbage service is difficult because of the lack of vehicles.

Except for the early days, all of the actual rebuilding has been done by the Germans themselves.

Any engineer contemplating our task in Berlin and throughout our occupation area must take a certain pride in the fact that our military governor and the commander-in-chief of our European Command is an engineer. General Lucius D. Clay was in charge of the construction of Denison Dam on the Red River on the Texas-Oklahoma boundary when our war effort began. His present responsibilities are far more vital than earth moving, far more vital than flood control, but he is discharging them with more than equal success.

Under his guidance the Germans are being helped to help themselves. They need food first, to mine coal second, to increase their industrial production of exportable goods third, to finance imports of goods that they lack. Oversimplified, perhaps, this is the German problem that must be solved before democracy can hope to function.

There are many features of the problem that concern the engineer and the construction man. One is the need for housing in the Ruhr so that more coal miners can be brought in. The situation is serious enough so that other construction in Germany may be held up in order that building materials can be channeled into Ruhr housing.

WIDE WORLD PHOTO

***. . . And Shabby Civilians**—Two years after the end of the war, scenes like these greeted ENR's editor on his arrival in Germany to begin a 2-month tour of U. S. occupied zones in Europe. Rubble is still the dominant feature of any Berlin scene, and shabbily-dressed civilians plod the streets.*

THIS IS NEWS

Members of Local 10 of the AFL Bricklayers, Masons & Plasterers Union of Port Huron, Mich., have apparently discovered that it is better to have plenty of work at reasonable wages than very little or none at all at higher wage rates.

To encourage more construction, the union recently rejected a 25-cent hourly wage increase. The union and local contractors had agreed on a new wage contract calling for a pay increase from $2 to $2.25 an hour, but the union asked that the wage scale be retained at the present rate of $2 an hour.

Massachusetts enacts pollution compact law

Co-operation between Rhode Island and Massachusetts in controlling pollution carried by waters between the two states has been assured by the passage of a Massachusetts law under which compacts to this end may be entered into with neighboring states.

Rhode Island recently passed a similar interstate compact permissive act.

Under the terms of the Massachusetts legislation, action by any two states sharing common borders suffices to warrant a compact even though other New England states have not yet adopted a similar course.

N. Y. City firm to plan one of Houston's tunnels

The request of Harris County, Texas, that the same firm of engineers be engaged for both the Pasadena and Spillman's island tunnels under the Houston Ship Channel (*ENR* May 22, vol. p. 848) was turned down May 22 by the Texas Highway Commission. The state body engaged the New York firm of Parsons, Brinckerhoff, Hogan and MacDonald for engineering services covering all surveys and planning for the Spillman's island project.

The Pasadena project, under an agreement reached last year, will be paid for entirely by the county and navigation district at an estimated cost of from $4,500,000 to $5,000,000.

At Spillman's island, the county will spend $2,900,000 and the highway commission will pay the remainder with its own and federal funds. Total expenditure is expected to exceed $8,000,000.

The county commissioners court, it has developed, is determined to engage Palmer and Baker for the Pasadena tunnel.

Ease controls on housing construction

Federal housing permits are no longer required of those who want to build homes for themselves or for veterans, the limit on the number of bathroom fixtures to be installed in a new house has been removed, and the 1,500-sq. ft. limitation on homes has been expanded to 2,000-sq. ft., effective June 1, House Expediter Frank R. Creedon announced last week.

At the same time, Mr. Creedon emphasized that these remaining controls will be continued:

The construction limitation order (VHP-1) under which authorization must be obtained to construct non-housing buildings, and the $50,000,000 weekly average ceiling on such authorizations; Veterans preference, under which a person building a house not intended for his own occupancy must give a veteran first choice in buying or renting the property; the requirement that houses be built for year-round occupancy.

In addition: Guaranteed market contracts for prefabricated houses and new-type materials; rent ceilings on new construction; sales prices and rent ceilings on houses built under priority authorization granted prior to Dec. 24, 1946; allocation of a few basic materials, such as pig iron for cast iron soil pipe, shop grade lumber for millwork, and three voluntary allocation plans, and the order (PR-28) which assists producers of building materials in obtaining new capital and replacement equipment and bottleneck production materials.

In making the changes, Mr. Creedon emphasized why he felt that the construction limitation order, which he considers the keystone of the housing program, must be continued. "There is an enormous backlog of deferrable commercial and industrial construction which is now held back by VHP-1," he explained. "While the materials situation has been improving steadily—enough, that is, to permit us to relax the one-bathroom and 1,500-sq. ft. limitations—it has not improved sufficiently to remove all controls.

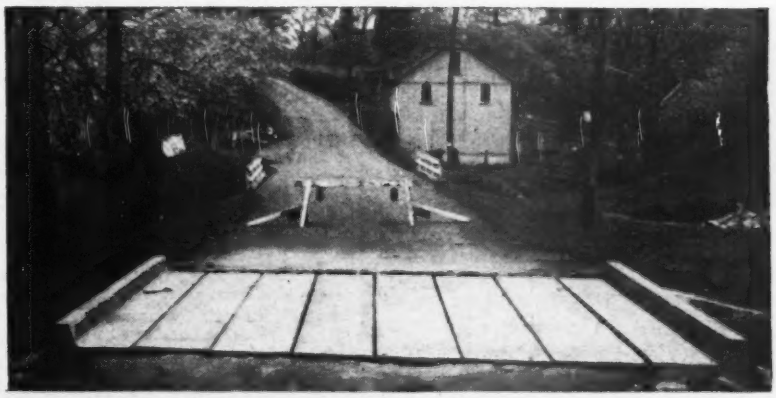
"Without the construction limitation order, there would be a mad scramble for materials, and home-building would suffer."

Record traffic in 1946 on upper Mississippi

Preliminary records gathered by the Corps of Engineers indicate that tonnage and ton-mileage figures for 1946 have exceeded the all-time record in the upper Mississippi River between the mouth of the Missouri River and Minneapolis, Minn.

The year 1944 was the previous record year. Production then was at a peak and every means of transportation was utilized to move great tonnage. With the cessation of hostilities, traffic dropped off slightly in 1945.

Preliminary figures for 1946 traffic indicate a total of 1,604,032,507 ton-miles for an increase over 1945 of 58.0%. Petroleum products and coal are leading in the items transported.



Precast Bridge Deck—*Pennsylvania's highway department is experimenting with a new-type concrete bridge for small stream crossings, where the deck structure is precast by a vacuum process, hauled to the construction site, and placed in sections on the abutments by cranes. Guard rails and bituminous flooring and approaches are added later. Use of the new type decking may appreciably cut the time a road is closed, because of more conventional types of bridge building.*

HIGHLIGHTS OF MUNICIPAL DEVELOPMENTS

Digested from reports by Engineering News-Record correspondents and the McGraw-Hill World News Bureau

Chattanooga, Tenn. plans $2.9 million improvements to municipal airfield, other cities report airport plans—Western New York towns may get Niagara River water—Baltimore plans $60 million, 2-year capital improvement program

Attempts to obtain an airport for Chattanooga, Tenn., capable of handling the largest type of planes advanced into the specific stage last week when the city commission agreed to a plan for the improvement of Lovell Field at an estimated cost of $2,972,613.

The plan was one of five submitted to the commission by the Harwood Beebe Co., Spartanburg, S. C., which made an 8-month survey of possible Chattanooga airport sites.

When the specifications are completed, they will be submitted to the Civil Aeronautics Administration for approval.

Chattanooga has applied to CAA for $1,500,000 for the airport, and will issue bonds equal to the amount received from the federal government.

Three other cities—Indianapolis and Muncie, Ind., and Rochester, N. Y., also reported consideration of major airport improvement work during the week.

The Rochester, N. Y., City Planning Commission authorized completion of plans and specifications for a modern terminal and administration building at the new Rochester Airport, to cost approximately $450,000.

Plans for construction of a new administration building at Weir Cook Municipal Airport, Indianapolis, Ind., at an estimated cost of $500,000 received tentative approval by the Indianapolis Board of Aviation Commissioners. The structure will be 300 ft. long and about 100 ft. wide, of brick construction. Contracts for construction of the proposed four-story Civil Aeronautics Administration control tower, at an estimated cost of $100,000, will be let before June 30, according to L. M. Marriner, Chicago, CCA engineer.

Members of the joint board for the proposed $500,000 Muncie-Anderson, Ind., airport have accepted and taken under advisement three of twelve revised bids for preliminary work on the project.

More than $80,000 in federal aid money under the Airport Development Program has been allocated. The $60,000 raised by Muncie was obtained by a 6-cent tax levy for the Muncie Aviation Commission. Originally the port was to be a tri-city project, but the City of New Castle dropped out several months ago and the remaining two cities agreed to a plan of joint financing and operation based on the assessed property value of the two cities.

Water from Niagara

The Western New York Water Co., has offered to expand its present facilities by constructing a new pumping station and filtration plant to furnish the Kenmore area, the Tonawandas and Lockport with water from the west channel of the Niagara River.

The company's proposal was presented at a hearing before the State Water Power & Control Commission held to consider the application of the Tonawanda town board to place an intake in the west channel for its proposed $1,700,000 municipal water plant.

The plant proposed by the company would consist of an intake structure with screens and with strength to resist ice pressure, an intake tunnel, a raw water pumping station in Tonawanda, a large pipeline for conveying raw water to the filter plants of Tonawanda and North Tonawanda and to the river pumping station at Lockport. A filter plant would be located in Tonawanda, with an initial capacity of about 12,000,000 gpd. with provisions for future expansion.

RADAR FOR SPEEDERS

A device utilizing war-developed radar and said to be capable of clocking automobile speeds on highways, is now being tested by the Connecticut State Highway Department.

Developed by the Automatic Signal Division of Eastern Industries, the device consists of a box-like transmitter which sends out a constant microwave. A moving car reflects the wave, causing a shift in the wavelength proportional to the speed of the vehicle. The direct signal from the transmitter and the reflected signal are compared by a meter, and the difference translated into miles per hour.

Initial use of the device will be for traffic and highway safety checks. But state police expect to use it later as a check on speeding motorists.

Improvements at Baltimore

Expenditure of a maximum of $59,826,000 in the next two years in a capital improvement program for Baltimore, Md., was recommended May 19 by the Commission on City Plan.

Twenty-six separate agencies of the city government had presented lists of "urgent" projects to be carried out in the next two years at an aggregate cost of $90,147,545.

In cutting by one-third the outlay urged by department heads, the total cut being $30,321,545, the commission warned that with the completion of the projects to which it gave approval for the first biennium of a long-range capital improvement program, an additional budgetary appropriation of $750,000 per year would be necessary.

Parking and traffic

The Boston, Mass., planning and zoning board has prepared an ordinance requiring owners of all new construction to provide facilities for automobile parking for occupants of their buildings as a step toward alleviation of traffic congestion.

Immediate start of construction of traffic circles and improvements in traffic routing for the purpose of eliminating bottlenecks and pedestrian hazards in the city has been ordered. Work will be begun at once on changes in congested spots in Boston's Fenway district at a cost of $300,000. Studies for relief of the city's worst traffic snarles in 10 other locations have been ordered.

Indianapolis, Ind., traffic experts have reported progress in plans to create one-way traffic streets through congested sections. Tentative plans include establishment of two 1-way belt systems. These are planned to operate on a 24-hour basis. The system is expected to relieve traffic congestion during rush hours and help to alleviate the parking problem.

Ultimately one-way traffic will be established on several major arteries during rush hours, doubling present street capacities. The plan is expected to be placed in operation by Oct. 15.

under the direction and planning of Maxwell Halsey, Michigan traffic expert.

At Danville, Ill., 150 parking meters are being installed on a 6-months trial basis. Many other cities have found them profitable and have continued them year after year.

Sewerage plans

Bridgeport, Conn., will ask bids June 12 to finance a bond issue of $500,000, proceeds from which will go for the construction of storm and sanitary sewers in the Sylvan Heights district, completion of the present contract at the Bostwick Avenue sewage disposal plant and work on the East Side sewage plant. Payment for bonds will be at the rate of $33,000 for ten years and then at a rate of $34,000 for five years.

Voters of Round Lake, Round Lake Beach, and Round Lake Park, Ill., May 17 approved a $300,000 bond issue to make possible a new sewerage system, calling for four principal trunk lines serving practically all areas surrounding the lake. Bids are expected to be taken as soon as the bonds are sold and plans have been approved by the state.

Toledo RR station

The New York Central Railroad has been authorized to spend $782,000 on the first stage of construction of the new Union Station in Toledo, Ohio. Final authorization came from John D. McGillis, manager of the nonresidential construction branch of the Office of Housing Expediter, Detroit, Mich.

The project eventually will cost $4,500,000, and when completed will replace with modern structures the present passenger station facilities, including buildings, platforms, canopies and coach yard.

Penn Statue Problems

Whether the statue of William Penn that tops the tower of the Philadelphia, Pa., city hall should stay there or be removed brought on a first-class controversy between two groups of engineers and architects last week.

According to Carl A. Ziegler, a local architect, the 53,523-lb. bronze statue of Phildelphia's founder should come down, along with the dome on which it stands. The statue, of bronze, until recently was held together by cast iron bolts—some of which have been replaced recently with bronze bolts. The tower is cast iron, camouflaged to look like stone, and both have been oxidized badly, Mr. Ziegler said.

Director of Public Works Thomas Buckley, however, said that the statue as well as the dome is "reasonably safe" He added that regular inspections are made in the interest of safety.

The city council resolved the controversy by appropriating $4,000 for an engineering survey to determine whether the statue should stay or come down.

***Tripler Hospital Advances**—Nearing completion on the Island of Oahu, Hawaii, is the 1,500-bed Tripler General Hospital. Location of the structure, in an earthquake zone, resulted in the use of reinforced-concrete, rigid-frame design, to resist lateral forces equal to .02 g., while the foundations are tied together to assure uniform action. Design features were outlined in detail in ENR July 12, 1945, vol. p. 44. The project is being built under supervision of the Honolulu district of the Corps of Engineers. York and Sawyer, New York, are architects, contractors Morrison-Knudsen Co., and Peter Kiewit Sons, Inc.*

Water projects

The Chicago engineering firm of Alvord, Burdick and Howson considered a group of bids submitted for construction of a 700,000-gal. water storage reservoir for the University of Illinois, and for installation of 26 fire hydrants and about two miles of water mains in the campus area. At Sparta, Tenn., city officials watched ground breaking exercises for the construction of a $200,000 filtration plant and improved water system. The program was overwhelmingly endorsed at a special election in which the city sought authority to issue revenue bonds to finance the improvement work.

At Bristol, R. I., the Bristol Water Co. has been asked to provide an additional 1.5 mgd. to meet expansion requirements of the Collins & Aikman Corporation, a textile plant operating in the area served by the company. A controversy has existed between the water company and the manufacturing concern over financing for a new source of supply, connecting pipelines and purification facilities which the water company officials claim would be necessitated by the new supply.

END OF TOLLS BRINGS TAX PAYMENTS

Officials of Council Bluffs, Iowa, reported an unusual result from their recent announcement that two bridges across the Missouri River to Omaha would soon be freed of tolls.

Almost immediately on the announcement, some 20 owners of property abutting the bridges appeared in county offices to pay up long-delinquent tax assessments.

Disaster police

Joe J. Rady, consulting engineer of Fort Worth, Tex., at a meeting of the North Texas Water & Sewage Association, started a movement for the Texas Department of Public Safety to have automatic police authority in disaster areas. He suggested that a community organization chart be set up showing that the department of public safety would be in command of all other organizations such as all departments of the city and county, the Red Cross, Salvation Army, etc., and each organization would be allocated positions on the chart. Mr. Rady said that lack of co-ordinated police control hampered early recovery work in the recent Texas City disaster.

Potomac Basin Commission outlines broad program of research activities

Self-purification of slow-moving streams will be studied with the Johns Hopkins University—Industrial wastes handbook ready

The Interstate Commission on the Potomac River Basin and the Johns Hopkins University will soon embark on a special research program to evaluate the changes that occur in various types of sludge deposited on the bed of a fast-flowing stream. The general plan for the project, which will be carried out under the direction of Charles E. Renn, professor of sanitary engineering at Johns Hopkins, was completed at the quarterly meeting of the commission last week at Cacapon State Park in West Virginia.

The commission has found that considerable study had been made of the self-purification of slow-moving deep streams but limited study of fast-moving waters. Much of the work now planned will be done in the vicinity of Cumberland, Md., in a region where sludge deposits of various types of mine and other industrial wastes, as well as municipal sewage, are found. Additional studies on streams where only one type of waste is encountered will also be made. It is further planned to study the effectiveness of low-overflow aeration barriers built of rock readily available in the stream.

Savage River Dam pushed

The commission's program of action also calls for every effort to complete Savage River Dam on the stream of that name 22 miles southwest of Cumberland. Extensive flood-control benefits would result by completion of this project and sanitation conditions of the Potomac in the vicinity of Cumberland would be improved because of increased dry-weather flows.

Savage River Dam, which calls for a 175-ft. high earthfill, was begun in 1939 as a WPA project and much was done before the job was shut down in December, 1942, because of the war. From original funds about $200,000 is available to complete the dam, which is expected to require a total of $2,500,000. Completion of the project by the Corps of Engineers has already been authorized and Congress is now being asked to provide funds to finish the structure. Hearings will soon be held by the House with the hope that construction can be resumed in 1948.

Plans were also completed at last week's meeting to permit the establishment of a number of new gaging stations on the Potomac, and several new sampling stations. The industries located in the Potomac Basin will do most of the work in setting up the latter stations and in testing the samples obtained.

The minimum water quality standards and the basin-wide zoning map prepared at previous meetings and described in detail in *ENR* June 27, 1946, vol. p. 991, have already been adopted by Maryland, West Virginia, and the District of Columbia, it was reported. The standards and the map are now being considered by Virginia and Pennsylvania.

Industrial waste handbook

A waste treatment guide that is expected to be of considerable interest to municipal and sanitary engineers alike is now being printed and will soon be distributed by the commission. The original plan was to deal with municipal sewage and wastes of only those industries in the Potomac Basin, but as now being published the guide will give aid on all general classes of industrial wastes.

Extensive road program in Missouri is ready

The Missouri County Aid Road Program became a reality recently when Governor Phil M. Donnelly signed a $2,000,000 appropriation bill. The measure makes funds available for construction or reconstruction of roads on milk routes, school bus routes and mail routes.

To participate in these funds for 1947 it is necessary that county roads scheduled for improvement be programmed; projects selected by the county county court approved and submitted to the Missouri State Highway Commission for its approval, and contracts awarded prior to June 30. Work selected by the county courts must be completed and funds paid to the contractors not later than December 31.

The construction of a total of 627 miles of county highways is ready to proceed as soon as plans and specifications are completed, approved and contracts awarded. Twenty-nine counties submitted programs for the construction or reconstruction of county roads under the program and the highway commission approved them May 13. This makes a total of 55 counties that sought aid in this measure and are ready to take advantage of the appropriation.

Shore and beach group holds annual meeting

Praising work already done by federal and local governments toward protection of shore-front lands, but noting that a "tremendous" amount of work still remains, members of the American Shore and Beach Preservation Association held their 21st annual meeting at Asbury Park, N. J., last week.

During the two-day session, the group heard papers by: Col. C. Lacey Hall, Corps of Engineers, senior member of the Beach Erosion Board, who discussed current policies of the corps; Conrad L. Wirth, chief of lands, U. S. Department of Interior, National Park Service; Morgan F. Larson, commissioner of the New Jersey Department of Conservation; George H. Bender, chairman, beach erosion subcommittee of the Committee on Public Works of the House of Representatives; Warren T. Hannum, director, California Department of Natural Resources; and Martin A. Mason, engineer for the Beach Erosion Board.

Among resolutions was one directing the group to bring the continuing needs of shore protection to the attention of responsible officials.

Expediter allots steel for housing

Representatives of the steel industry have agreed voluntarily to allocate 261,000 tons of steel in the third quarter of 1947 for those housing items which the Office of the Housing Expediter considers critical.

That amount of steel will be shipped to producers of plumbing and heating, builders hardware, wiring devices, window sash and frames, and other critically needed housing items, as well as industrially-made houses, panels and sections.

Until April 1, 1947, the Civilian Production Administration issued ratings to producers of such items to obtain steel. The formal allocation system was dropped April 1, and the voluntary allocation system substituted.

Certified for housing under the direct allocation system in the first quarter was a total of 295,000 tons. The voluntary allocation in the second—or current—quarter was 297,000. The figure of 261,000 tons for the third quarter reflects a closer balance between supply and requirements on some items and the inability of manufacturers of industrially-made houses to get under way.

Federal controls on stream pollution not needed, sewage groups are told

New York-New England Sewage Works Associations meeting in Albany also hear that plant construction costs remain high

Opposition to federal control of stream pollution abatement and to the use of federal grants for this purpose was voiced by Warren J. Scott, director of the Bureau of Sanitary Engineering, Connecticut State Department of Health in a talk before a joint meeting of the New York-New England Sewage Works Association, held at Albany, N. Y., on May 26 and 27.

In addition to discussions on legislative aspects of stream pollution, an audience of 300 heard from Francis Friel, consulting engineer and president of the Federation of Sewage Works Associations, that construction costs for treatment works would remain high and probably level off at a point not less than 50 percent above prewar costs. Other reports dealt with industrial waste plant design and the status of domestic sewage installations in New York State.

State vs. federal control

Mr. Scott argued that states, with their intimate knowledge of local conditions, technical, legal and economic, are better equipped than a federal agency to solve stream pollution problems. Opposing federal grants-in-aid except as a part of a broad public works program, he reported that the financial status of states and localities is, in general, better than that of the federal government.

Federal pollution-abatement activities, said Mr. Scott, should encompass only three phases: promotion, coordination and research. A clearing house for research projects would eliminate duplicate studies, distribute findings among states and industrial laboratories, and expedite technical progress by means of rapid interchange of basic data. Finally, a federal research organization investigating and reporting upon sewage and, particularly, industrial waste treatment processes would provide a needed basic service.

"To date, stream pollution in ten states is controlled entirely by state health departments; eleven states provide regulation by health departments in conjunction with representatives of other closely-allied departments; seventeen states are served by divided departmental responsibility; four have water pollution control boards, and six have no regulatory agencies," Mr. Scott concluded.

The inability of the construction industry to build treatment plants already designed and financed, Mr. Friel said, was a retarding factor in a widespread program of stream pollution improvement. He gave two causes for this condition: excessive construction costs and erratic production and distribution of building materials, and prophesied that work in this field will begin "perhaps within six months." However, costs will be up by at least 50 percent.

Treatment trends discussed

Treatment of industrial wastes before entrance into the domestic sewerage system and by-product recovery of valuable raw materials are two important trends in this field. Another is the increasing use of chemical processing methods, Mr. Friel said.

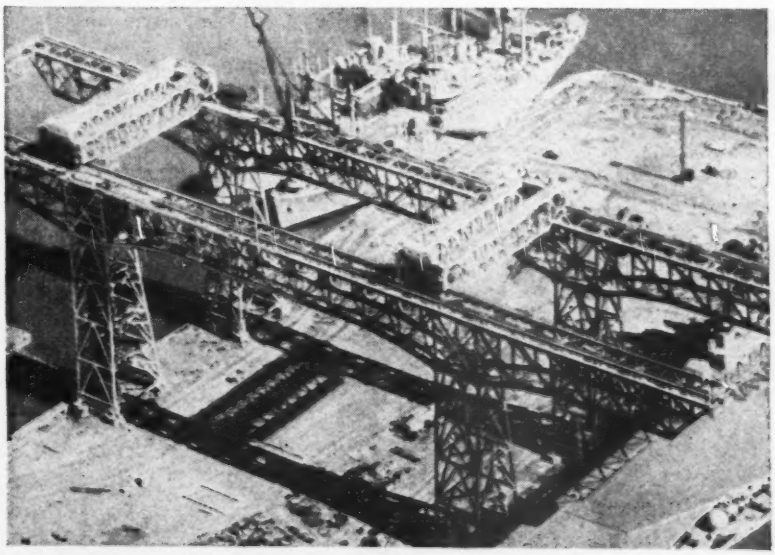
Morris M. Cohn, consultant to the special committee on pollution abatement of the Joint Legislative Committee on Interstate Cooperation, reported that of 437 municipalities in New York State, 331—with a population of 6,655,000—are served by 291 sewage treatment plants and that 106 communities have no such facilities. Of the sewered population, 78 percent of the upstate portion has disposal plants, but only 58 percent of the whole state is so served.

Summarizing conclusions of a progress report recently issued by his committee, Mr. Cohn said that every region in the state has a stream pollution problem, either with domestic or industrial wastes but although municipal officials are generally aware of the need for treatment works, restrictive laws and high bonded indebtedness are factors that make remedial action difficult. Any state-wide abatement program will receive wide support, he added.

During discussion of a paper on disposal of wastes from a chromium plating plant, written by Almon L. Fales of Metcalf and Eddy, Boston, Mass., William S. Wise, chief engineer for the Connecticut State Water Commission, took the occasion to point out that under Connecticut law, the water commission must advise how treatment shall be carried out. "This requirement has resulted in much state-sponsored research that has contributed immeasurably to the solution of diverse problems," he said.

Awards made

Mr. Friel made the following presentations: to John W. Eagleson of Great Neck, L. I., a cup, for the best operator's report; to William L. Edwards, operator of the Gowanda (N. Y.) State Hospital treatment plant, a certificate of excellence for the best report submitted by a previous winner of the cup; and to John D. McDonald, engineer of the Springfield, Mass. plant, the 1944 George B. Gascoigne award.



***Lifting Devices Installed**—The Navy Department has completed installation of travelling lifting devices on its newest and biggest bridge-type crane at the San Francisco Naval Shipyard. (ENR Feb. 13, vol. p. 253). Biggest in the world, the crane can lift 450 tons, with its two "trolleys" operating either separately or in tandem from a height 182 ft. above the ground.*

MEN AND JOBS

Fred L. Rice, West Hartford, Conn., and **Dwight E. Smith,** West Haven, Conn., have been confirmed by the Connecticut General Assembly to be members of the State Housing Authority. Mr. Rice is president of the Fred L. Rice Co., general contractors, while Mr. Smith conducts an architectural business at 95 East Brown St., West Haven.

Douglas Gardner, engineer for Carleton County, Ont., Canada, has retired and has been replaced by **John Adams** of London, Ont.

Henry Whitlock, Waterbury, Conn., has been named city engineer of Waterbury to succeed **Charles A. Root,** who retired May 1 after serving the city 50 years. Mr. Whitlock has worked in the city engineering department under Mr. Root for 20 years.

LeRoy F. Grant of Kingston, Ont., is new president of the Engineering Institute of Canada. A veteran of both World Wars, he has long been a leader in Canadian engineering circles. His career includes service as a railway engineer, and a member of the faculty of the Royal Military College and at the Queen's University, Kingston. (ENR May 22, vol. p. 853).

C. K. Dalton, has resigned as county surveyor with Lewis and Clark County with headquarters at Helena, Mont., to go with the Montana State Highway Department. He was formerly city engineer at Helena.

Ray C. Deagan has been appointed county highway engineer for Earth County, Minn., with headquarters at Mankato. He succeeds **Don E. Engwalson,** who has resigned after 10 years of service, to enter private business. Mr. Deagan has been state highway project engineer at Mankato since 1935.

Roy Tyson, formerly of Bismarck, N. D., and an employee of the state water commission for the last six years, has been named county engineer for Traill County, with headquarters at Hillsboro, succeeding **E. W. Braasch,** who resigned. He formerly was the Devils Lake division maintenance engineer and prior to that with the Reclamation Service.

James Kellogg has returned to the Illinois Division of Highways, Bureau of Design, from the State Department of Aeronautics, where he had been working for the last six months.

Albert Raulin started work with the Illinois Division of Highways, Springfield, as civil engineer, railroad crossings, May 1. From October, 1946, until May 1 last he had been with Jenkins, Merchant & Nankivil, consulting engineers, Springfield.

Marshall Dayton, safety engineer for the Bureau of Reclamation of Yuma, Ariz., brings to his job the background of 14 years' experience as a construction engineer on many reclamation projects in western states.

Edwin A. Fisher (left), Rochester, N. Y. city engineer "emeritus" and first president of the Rochester Engineering Society, chats with ASCE Honorary Member Charles F. Kettering, at a dinner celebrating the 50th anniversary of the organization.

The Francis Co., engineers and designers, have moved into their new offices at 222 North Michigan Avenue, Chicago 1, Ill.

W. V. Kerns, Mason City, Iowa, building and bridge superintendent of the Mason City subdivision of the Chicago & Northwestern Railroad Co., has been named engineer for the Black Hills division at Chadron, Neb.

W. H. Oswalt III, assistant to the city manager of Dallas, Tex., and former water department engineer there, has been appointed city manager of Jacksonville, Tex. He was educated at Harvard University and Shrivenham University in England.

A new engineering and concrete construction firm—Lewis & Mounger—has been formed at Houston, Tex., by **George Lewis** and **Grover Mounger.** Lewis was educated at the University of Houston and Texas A. and M. College, and Mr. Mounger at the University of Houston and North Texas Agricultural College.

Resignation of C. J. Guldin, of Ardmore, Pa., as resident engineer of State Highway District No. 6, Ardmore, has been announced.

John R. Tanner, formerly with the water division of the War Production Board as regional engineer is now with Holmes, O'Brien & Gere, consulting engineers, Syracuse, N. Y., specializing in sanitary and municipal engineering, and subdivision development. He will be in charge of the design and construction of water supply and treatment projects. Previously Mr. Tanner spent about 20 years in Florida in the design, construction and operation of water utilities.

William B. Gray, consulting engineer, Brooklyn, N. Y., has been appointed chief engineer for Leeger Associates, Inc., 100 West 42nd St., New York City, on their American Venice Development on the Great South Bay, Lindenhurst, Long Island. He will have charge of sewers, highways, water supply, sanitation and construction of bridges, bulkheads and piers, also 400 dwellings, a club house and two or more large hotels.

Cecil Atkinson, Oakland, Iowa, after 17 years with the Iowa State Highway Commission, will go into business for himself at that city to manufacture concrete products.

Robert H. West, Moline, Ill., has become resident construction engineer, with Warren & Van Praag, Inc., Decatur, Ill. He is at Grayville, Ill., on construction of water and sewerage work. West was in Washington, D. C., with the F. W. A., from March, 1937, to April, 1942; with the Chicago Bridge and Iron Co., Chicago, Ill., from May 1942 to August, 1944; and city engineer, Marshfield, Wis., from July, 1945 until April, 1946.

Robert M. Smith, director of public works of Kenosha, Wis., announces three changes in the engineering staff: **H. T. Rudgal** has been appointed superintendent of the water department, succeeding **James W. Myers, Jr.,** who has gone with the Philadelphia Suburban Water Co. Rudgal has been superintendent of the Kenosha sewage treatment plant, a division of the water department. **Frank I. Vilen,** formerly assistant city engineer, has been promoted to the superintendency of the sewage treatment plant. **Elroy F. Spitzer,** civil enginering graduate of the University of Wisconsin and recently discharged officer in the Civil Engineers Corps of the United States Navy, has been appointed assistant city engineer.

Election of **Malcolm W. Reed** as engineering vice-president of Carnegie-Illinois Steel Corp. has been announced. Mr. Reed has been chief engineer since March 1, 1939. Previously he was vice-president in charge of operations of the American Steel and Wire Co. He was graduated from the U. S. Naval academy in 1916 and began work with American Steel and Wire in Worcester, Mass. He became foreman of the rope mill at New Haven, Conn., in 1919. After advancing to the superintendency of the New Haven plant, Mr. Reed returned to Worcester as assistant district manager in 1928, and four years later was appointed chief engineer in Cleveland, Ohio. He became assistant to the vice-president and chief engineer in 1933 and was elected vice-president in 1937.

Guy Lowers, is now at Knoxville, Ill., as resident engineer for Warren & Van Praag, Inc., Decatur, Ill. After service with the Illinois Division of Highways and private concerns he returned to Chicago as superintendent of construction on Union Depot project.

J. August Rau, chief engineer of the Allison Steel Manufacturing Co., Phoenix, Ariz., has received an Army Engineer Board Citation in recognition of outstanding work in designing the developing models of pontoon bridges during the war.

Construction of the crushed stone plant for building Allatoona Dam near Cartersville, Ga., is the concern of R. E. Burgess (left) general manager for the Kershaw Mining Co., and Burton J. Bell, representing the South Atlantic division of the Corps of Engineers, U. S. Army.

W. R. LaDue (left) AWWA president and chief engineer of the Akron, Ohio Water and Sewage Bureau, and J. C. Kreinheder, director of water, Buffalo, N. Y., lead an inspection party during the spring meeting of the New York Section, AWWA, held recently at Buffalo.

Roy H. McAndrew, former assistant bridge engineer California Highway Department, has been appointed construction engineer, for U. S. Engineers Corps, assigned to Japan for duty. Mr. McAndrew was at the Hanford Engineering Works, Hanford, Wash. for 22 months.

Clarence H. Paris, Springfield, Ill., has resigned as chief engineer, Chicago & Illinois Midland Railway Co., to become vice-president and chief engineer with the railroad contracting firm of Track Maintenance Specialists, with offices in Chicago and Oak Park, Ill., A graduate in engineering from the University of Wisconsin, he started his railroad career 41 years ago, serving with the Wisconsin Central, Northern Pacific, Minneapolis, Northfield & Southern, and Chicago & North Western Railroads, until he was appointed, March, 1926, as chief engineer with the Chicago & Illinois Midland Railroad Co. To Mr. Paris' former position, **E. M. Loebs,** Springfield, has been advanced from assistant engineer. He served with the Army Engineer Corps from May, 1942, to December, 1945, when he was released from active duty as a major.

Burton M. Hill, formerly chief engineer of New Brunswick's department of public works and latterly minister of that department, has been elected president of the Stadacona Mines Ltd.

Donald O. Turnbull, of St. John, N. B., who had wartime service with the Canadian Air Force as an engineer, is now a consulting engineer, having acquired the appraising and valuating part of a business of E. R. Bates, a contractor, of St. John, who died recently. Before the war Mr. Turnbull was on the engineering staff of the Foundation Co. of Canada, Montreal, Que., and had considerable experience in construction work.

L. Silas Moore (left) supervising engineer for the Public Roads Administration; Vernon C. Smith (center) project engineer for the Georgia State Highway Department, and Winston Jarriel, superintendent for Scott Construction Co., watch pile driving for new bridge across the Altamaha River in Georgia.

Henry G. Porak, assistant city engineer at Tacoma, Wash., for the last year and previously for many years with the Washington State Highway Department, has been appointed city engineer of Olympia, Wash. He replaces **Charles H. Williams,** whose duties as water department superintendent will keep him engaged as inspecting engineer for a $1,000,000 water supply project now under construction.

E. H. Orange, former head of the highway survey party at Culpeper, Va., has been appointed assistant highway resident engineer at Fairfax, succeeding **L. R. Treat, Jr.,** shifted to the resident engineer's post at Wise.

Texans will vote on two large building programs

The Texas Legislature has submitted for a popular vote two constitutional amendments that would permit large-scale building programs.

In August, voters will decide whether they want The University of Texas to get $10,000,000; Texas A. &. M. College $5,000,000, and fourteen other colleges approximately $50,000,000 for buildings. The amendment would permit the university and A. & M. issue building bonds for sale to their own endowment account, and levy a 5-cent statewide ad valorem tax to raise building money for other schools, approximately $1,750,000 a year for 30 years.

In November, 1948, Texans will vote as to whether they want to abolish the ad valorem tax for state general revenue purposes, and let counties instead levy the tax of 30 cents on $100 valuation. The amendment would restrict counties to spending their income on roads and flood control, which legislators believe would make possible a $300,000,000 lateral road program during the next 20 years.

The present policy of the state highway department to construct only $8,000 and $10,000-per-mile farm-to-market roads is so expensive and slow that it would take many years and be of prohibitive cost to construct the needed rural roads," Rep. James Sparks said in criticising present highway policies.

Sparks exhibited correspondence from D. C. Green, state highway engineer, reported that the department plans to build 4,000 miles of farm roads and 1,800 miles of primary highway during the next two years. Caliche (soft lime rock) and gravel roads cost about $8,000 a mile with an additional $1,400 per mile for asphalt surfacing, Greer wrote.

FHA has insured over $10 billion in loans

The Federal Housing Administration has insured more than $10,000,000,000 of loans under various phases of its program, it has been announced by Raymond M. Foley, FHA Commissioner. More than half of this amount has been repaid or amortized.

Beginning in 1934 when Congress passed the original National Housing Act establishing the FHA and authorizing it to insure mortages on privately built and financed dwellings, the FHA has steadily developed as one of the key factors in home building and financing, Mr. Foley said.

Vast new building plans for University of Calif.

With a record present enrollment of over 40,000 students, the University of California has under way a $105,000,000 construction program to provide facilities and housing. Of this amount the state legislature already has appropriated about $47,000,000. The balance is contained in two bills now awaiting action in the state capitol, one asking $22,000,000 to add to originally appropriated funds because of increased construction costs, the other for funds to add space for present and future student needs.

The number of students now on the five campuses of the university shows an increase of 14,000 over 1939 and reflects population gains made by the state during and after the war.

Only five major buildings of the more than fifty in this postwar construction project have been started. Bids have been called on others, but were rejected because they were considered excessively over estimates.

Of the five buildings under construction two are on the Los Angeles campus. For the new Business Administration and Economics building $1,000,000 is available and $500,000 more has been asked. The other, for which ground was recently broken, is a library wing for which $790,000 is available and $395,000 needed for completion. On the agriculture school's campus at Davis, a $600,000 Irrigation and Soils building has just been started. At Berkeley two buildings are under way, with $1,600,000 already appropriated and $750,000 still needed.

Resume surveying work for Missouri Basin

The Bureau of Land Management cadastral engineers of the Department of the Interior have resumed surveys of portions of Montana, Wyoming and North and South Dakota, as part of the advanced planning phase of the Missouri Basin development program.

W. R. Bandy, acting regional cadastral engineer, reports that survey parties are now at work in the field in the four states.

The engineers also will prepare revised township plats on the units of the Missouri Basin project and will re-monument, when necessary, the original section corners established more than 50 years ago by the U. S. General Land Office. The mapping operations are being performed with the aid of aerial photographs.

Way opened for radio use by highway departments

In response to a request from the American Association of State Highway Officials, the Federal Communications Commission has assigned certain radio channels for experimental use by the maintenance divisions of state highway departments. These channels are in the 30-40 Mc and the 72-76 Mc bands. If the demand appears to warrant it, the assignment will be made permanent, which will permit the use of radio by highway departments on a basis equal with police, fire, forestry, and similar licensed emergency services.

Because the present authorizations are on an experimental basis, T. H. Dennis, chairman of the AASHO subcommittee on the use of radio in highway departments, has just appealed to all highway departments that are giving consideration to this matter to file applications with the FCC at the earliest possible date.

N.& W. Railway contracts for $12 million tunnel

The Norfolk and Western railway May 23 closed bids on a $12,000,000 main line tunneling project west of Bluefield, W. Va., which will eliminate the single-track Elkhorn tunnel, a "bottleneck" in its traffic flow.

Bidders were not disclosed but officials expect to award a contract shortly, to permit work on the project to start by midsummer. Approximately three years will be required to complete the work.

The project involves the relocation of 5.27 miles of new line between Lick Branch and Cooper, 11 miles west of Bluefield; construction of a new double-track tunnel 6,900 ft. long; elimination of the Elkhorn Tunnel; erection of two new steel bridges and the rebuilding of a third.

Build underground plant for atomic research

Monsanto Chemical Co. is building a plant partly underground at Miamisburg, Ohio, to house an atomic research center, the U. S. Atomic Energy Commission and the firm said in a joint statement. Construction started last September.

The facility will be a research laboratory for the investigation of basic chemical problems in the field of atomic energy. Part of the plant will be underground in order to obtain conditions necessary to certain types of laboratory work.

ENGINEERING SCHOOL NEWS

General and scientific college education should be integrated, says Prof. F. V. Hunt of Harvard—3-year water and sewage research at Georgia Tech.—City planning at North Carolina

"A rational approach to the engineering education problem demands that the scheme for general education should be integrated with scientific education throughout the college program, according to Frederick V. Hunt, chairman of the department of engineering sciences and applied physics at Harvard University. Elaborating his views, he said recently:

"Non-scientific courses should not be bunched into the first two years as something to be disposed of so that the student can get on with his serious study—but should be made an integral part of training for an engineering career. Courses for general education need not be something introduced to broaden—by wedging apart—the components of the scientific program. General education has a coherent intellectual content of its own; a discipline in logical thought, discrimination of values and the art of communicating thought, which merits the attention of the student engineer before, during and after his induction into the fraternity of practicing engineers.

"These two features, therefore, seem to comprise a new approach to the problem of engineering education: a concentration on the fundamental sciences basic to engineering practice to the exclusion of diversionary efforts to attach permanent significance to an evolving practice, and an integration of the substantial content of general education into a program of science training. No individual component of the program as a whole is new. Yet the unification of these various ideas into a coherent plan of education seems to provide a bright new hope for turning out of our colleges a generation of engineers who will be able to measure up to the demands of the important role which technology plays in our lives."

The United States Public Health Service has made a grant through the National Institute of Health to the Georgia School of Technology for a 3-year project of fundamental research in water and sewage analysis. About $20,000 is available for the first year's work. The director of the Georgia Tech engineering experiment station, G. A. Rosselot, announces that this project will be conducted in the new sanitary engineering section of the department of civil engineering under the direction of G. W. Reid, associate professor of sanitary engineering. C. E. Renn, of Johns Hopkins University, will collaborate with Professor Reid. Methods developed will make possible better coordination between control tests and the operation of water and sewage plants.

The University of North Carolina has established a department of city and regional planning in its graduate school. The program is directed by Prof. John A. Parker, formerly chairman of the division of planning of the Rhode Island School of Design and more recently community planner with the Tennessee Valley Authority. The course leads to the degree of master of regional planning and is open to qualified students holding undergraduate degrees, preferably in the fields of engineering, architecture, economics, geography, landscape architecture, political science or sociology. Towns, cities, counties, states and regions of the Southeast will serve as laboratories for projects in collaboration with the TVA, state and local agencies, and the Institute of Government. Required is a period of three months' internship in a planning agency.

W. H. Rayner, associate professor of civil engineering, University of Illinois, will direct the university's summer surveying camp in Minnesota this year, and M. O. Schmitt, assistant professor of civil engineering; Leonard O. Walker, associate professor of general engineering drawing; and Edward D. Ebert, instructor in general engineering drawing, will teach. George H. Dell, assistant professor of civil engineering, will be in charge of the surveying course to be held during the same eight weeks at the Allerton Estate, 25 miles southwest of the campus, for students who can not attend the Minnesota camp.

Additional civil engineering school enrollment information received is as follows: At the school of engineering, Pennsylvania State College, present total enrollment is 1,359, including 188 students of civil and sanitary engineering. There are no freshmen at Penn State, but there are about 100 freshmen at cooperating institutes who intend to start as sophomores in civil engineering at the college next fall. As of March last, in the sophomore, junior and senior classes at Iowa Stage College there were 272 in civil engineering out of a total of 2,202, not including agricultural engineers who are in both engineering and agriculture.

Colorado Dam Under Way — *The Bureau of Reclamation recently announced award of a $1,925,904 contract to the Vinnell Co., Inc., of Alhambra, Calif., for completion of Jackson Gulch Dam, in the West Mancos River in southeastern Colorado. Foundation and left abutment of the rolled-earth structure, shown above, were partially completed during war years by "conscientious objectors." Embankment will be 1,900 ft. long, 180 ft. high.*

OBITUARY

Kingsley L. Martin, 78, former commissioner of bridges, New York City, died at Nutley, N. J., May 28. A graduate of Brooklyn Polytechnic Institute, 1888, and the holder of an engineering degree from Stevens Institute of Technology, Mr. Martin in 1892 was appointed assistant engineer of the Brooklyn Bridge and in 1896 was appointed to a similar position on the Williamsburg Bridge, eventually becoming engineer in charge. In 1908 he was promoted to chief engineer of the Department of Bridges, becoming commissioner in 1910. The next year he resigned that position to become vice-president of the Foundation Company of New York. In January, 1914, he left that company to become first vice-president of the Whiting Paper Co. of Holyoke, Mass. In 1915 he became president of the Engineer Company, New York.

Elmer Buskirk, 80, former Monroe County, Ind., surveyor, died May 14.

W. W. Stuttz, 52, construction engineer with C. M. Guest and Son of Anderson, S. C., died at Salisbury, N. C., May 24.

Francis W. Perry, 71, consulting engineer of Brooklyn, N. Y., died there on May 23. Most of Mr. Perry's active career was spent in the engineering departments of New York City, beginning as a surveyor for Queens County. Subsequently he was with the city's Department of Bridges, and in 1909 was appointed engineer for the Sinking Fund Commission. After World War I, in which he served as a captain of engineers, he returned to bridge design work for the city as principal engineering assistant in the Department of Plant and Structures.

Grover F. Conroy, 60, transportation engineer for the California Public Utilities Commission for the last five years, died May 19 in San Francisco. He was formerly county engineer of Placer County and state highway engineer of New Mexico.

Ralph E. Sawyer, 62, retired civil engineer of Kittery, Me., died May 18 in Portsmouth, N. H.

Basil A. Kononoff, 65, civil engineer who worked on early developments for Hollywood, Fla., died recently in Miami. He was a native of Russia, and went to Miami from New York 27 years ago.

Horace Hamilton Person, control officer of the North Pacific division, Corps of Engineers, and president of the Portland chapter of the American Society of Military Engineers, died at Portland, Ore., May 17. He was commissioned captain in the fall of 1942 and stationed with the Army Engineers at Portland, and in 1945 he was promoted to major. He served as acting district engineer for a time. Returning to civilian status, he took over the position he held until his death.

Frank H. Macy, 61, civil engineer, died May 19 in Rochester, N. Y. Former chairman of the Port Commission of Rochester, he was responsible for the construction of the Rochester harbor as it is today. For the last 12 years he was associated with the engineering department of the Rochester Gas & Electric Corp., and for eight years was a director of the Great Lakes Harbor Association and served on the Harbor Advisory Board.

W. P. Hennessy, 76, former chief engineer of the old Bureau of Public Buildings and Offices of the Borough of Brooklyn, N. Y. City, died May 25. Mr. Hennessy entered the service of the old city of Brooklyn in 1896. He was an engineer with the Brooklyn bureau of sewers before he became attached to the Bureau of Public Buildings and Offices. For that bureau Mr. Hennessy was in charge of the erection of the present New York City Municipal Building. He also took a leading part in the building of the Central Court House and the Coney Island boardwalk. He retired in 1942.

MAJOR MEETINGS

American Society for Testing Materials, 50th annual meeting, Chalfonte-Haddon Hall, Atlantic City, N. J., June 16-20.

American Society of Engineering Education, annual meeting, University of Minnesota, Minneapolis, Minn., June 17-21.

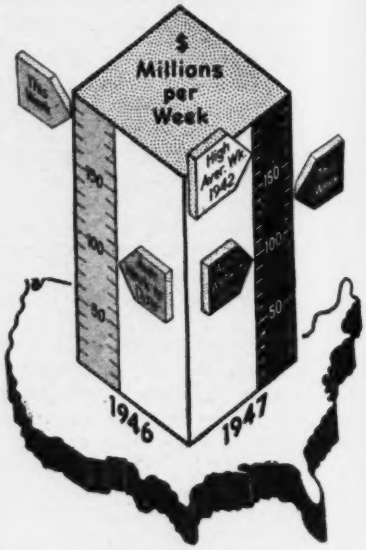
President's Highway Safety Conference, Action Program group, Auditorium, Department of the Interior, Washington, D. C., June 18-20.

Midwest Flood Control Conference, Hotel Severin, Indianapolis, Ind., June 18-20.

American Water Works Association, 67th annual conference, jointly with Federation of Sewage Works Association, 20th annual meeting, Civic Auditorium, San Francisco, Calif., July 21-25.

Federation of Sewage Works Associations, jointly with American Water Works Association. See above.

CONSTRUCTION ACTIVITY



As Reported this week to ...
Engineering News-Record

CONTRACT VOLUME

Continental U. S. Only (Thousands of Dollars)

	Week of June 5 1947	Cumulative 1947 (23 wks)	Cumulative 1946 (23 wks)
Federal	$32,810	$258,927	$257,510
State & Mun.	39,297	679,344	551,987
Total Public.	$72,107	$938,271	$809,497
Total Private	48,970	1,339,496	1,449,388
U. S. Total	$121,077	$2,277,767	$2,258,885

WHERE CONSTRUCTION ACTIVITY ORIGINATED THIS WEEK

Dollar Volume (Thousands)

Type of Work	This Week	Cumulative 1947 (23 wks)	Cumulative 1946 (23 wks)
Waterworks ..	$816	$50,988	$42,323
Sewerage	3,316	47,687	35,093
Bridges	5,694	69,843	52,474
Highways	25,844	318,675	313,821
Earthwork, Waterways	24,118	128,938	158,746
Buildings, Public	6,600	216,804	138,301
Industrial ..	8,132	346,810	478,408
Commercial	39,325	797,390	878,054
Unclassified ..	7,232	300,632	161,665

NOTE: Minimum size projects included are: Waterworks and waterway projects, $22,500; other public works, $40,000; industrial buildings, $55,000; other buildings $205,000.

NEW PRODUCTIVE CAPITAL

	Cumulative 1947 (23 wks)	Cumulative 1946 (23 wks)
NON-FEDERAL ...	$712,638	$454,739
Corporate Securities	244,729	187,317
State and Municipal	467,909	267,422
FEDERAL	.....	158,320
Total Capital.....	$712,638	$613,059

ENR INDEX NUMBERS

Index Base = 100		1913	1926
Construction Cost..	June '47	403.29	193.86
Building Cost	June '47	303.14	163.87
Volume	May '47	224.	98.